

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in view of the present amendment and in light of the following discussion, is respectfully requested.

Claims 1-5 and 8-20 are presently active in this case. The present amendment amends Claims 8, 18, and 19. The present amendment finds support in the original specification, for example, at page 11, lines 5-17. Additionally, the present amendment corrects informalities. Thus, it is respectfully submitted that no new matter is added.

The outstanding Office Action rejected Claims 1-5 and 8-13 under 35 U.S.C. § 112, first and second paragraphs, as not enabled and indefinite; rejected Claims 8, 18, and 19 under 35 U.S.C. § 112, second paragraph, as indefinite; and indicated that Claims 1-5 and 8-20 would be allowable if rewritten or amended to overcome the rejections set forth in the Office Action.

The Applicant appreciatively acknowledges the indication of allowable subject matter. In response, Claims 8, 18, and 19 are amended.

In response to the rejections of Claims 1-5 and 8-13 under 35 U.S.C. § 112, first and second paragraphs, these rejections are respectfully traversed. The outstanding Office Action states that Claim 1 is at odds with the specification as Claim 1 recites “a vapor-liquid phase separating region” whereas the specification recites “a vapor-liquid phase separating hole 7.”¹ It is respectfully submitted that the claimed “vapor-liquid phase separating region” is consistent with and clearly disclosed in the present application. The specification clearly states that, in a non-limiting embodiment of the invention, a vapor-liquid phase separating hole is provided to separate and suppress heat transfer between vapor-phase path 3 and liquid-phase path 5.² A “hole” is generally defined as a cavity or opening through

¹ See the outstanding Office Action at page 2.

² See the original specification, at page, 9, line 23, to page 10, line 6.

something.³ As is evident from the drawings, hole 7 is a three-dimensional space through substrate 2 that is located between paths 3 and 5. The space defined by hole 7 clearly provides support for the vapor-liquid phase separating region recited in the claims.⁴ The Applicant submits that it is not inconsistent or unclear to refer to a space defined by a hole as a "region," and such a recitation would be clear to one of ordinary skill in the art based upon the disclosure. Therefore, it is respectfully submitted that the "vapor-liquid phase separating region" recited in Claims 1 and 14 is not at odds with the specification.

The outstanding Office Action also states that it is not seen how the grains filling in the communicating hole are configured to decrease the conductance of the communicating hole.⁵ As stated in the original specification, for example at page 16, lines 6-17, since the communicating hole is filled with grains, the conductance in the evaporator wick communicating hole is decreased and a capillary force is generated in the filled portion. Since the communicating hole is filled with grains, the communicating hole does not conduct fluid as readily as it would if the communicating hole were empty due to the capillary force generated by the grains filling the hole. Therefore it is respectfully submitted that the specification fully and clearly describes how the grains filling the communicating hole are configured to decrease the conductance of the communicating hole.

The outstanding Office Action also states that it is not seen how the vapor-liquid phase separating region is configured so that the heat transfer is suppressed between the flow path of the liquid-phase working fluid and the path of the vapor-phase working fluid.⁶ The original specification, for example, at page 9, line 19, to page 10, line 6, with corresponding Figures 2 and 3A-3C, disclose a non-limiting embodiment in which the vapor-phase path is separated from the liquid-phase path by a vapor-liquid phase separating hole. A hole is a

³ See Webster's II, New College Dictionary.

⁴ Webster's II, New College Dictionary, generally defines "region" as a continuous portion of a surface or space.

⁵ See the outstanding Office Action at page 2.

⁶ See the outstanding Office Action at page 2.

cavity or an opening through something. The presence of the opening and distance it provides between the vapor-phase path and the liquid-phase path insulates the paths from one another in the same manner as, for example, the space between the panes of a double-paned window insulates the inside of a building from the temperature outside the building. Therefore, it is respectfully submitted that the specification fully and clearly describes how the vapor-liquid phase separating region is configured so that the heat transfer is suppressed between the flow path of the liquid-phase working fluid and the path of the vapor-phase working fluid as would be readily apparent to one of ordinary skill in the art based upon the disclosure therein.

It is respectfully submitted that Claims 1-5 and 8-13 are described in such full, clear, concise, and exact terms as to enable any person skilled in the art to make and use the same, and that the claims particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. Thus, it is respectfully requested that the rejection of Claims 1-5 and 8-13 under 35 U.S.C. § 112, first and second paragraphs, be withdrawn. Further, as Claim 14 recites analogous terms to those discussed above, it is respectfully submitted that Claim 14, and the Claims depending therefrom, are enabled and not indefinite.

In response to the rejection of Claims 8, 18, and 19 under 35 U.S.C. § 112, second paragraph, Claims 8, 18, and 19 are amended to recite proper Markush language, as suggested by the outstanding Office Action. Additionally, the registered trade name "Teflon" is removed from Claim 19 and replaced with "polytetrafluoroethylene", which is the generic name for Teflon. Finally, the term "PDMS-(polydimethylsiloxane)" is replaced with "polydimethylsiloxane" in order to remove all parenthetical statements from Claim 19, as suggested by the outstanding Office Action.

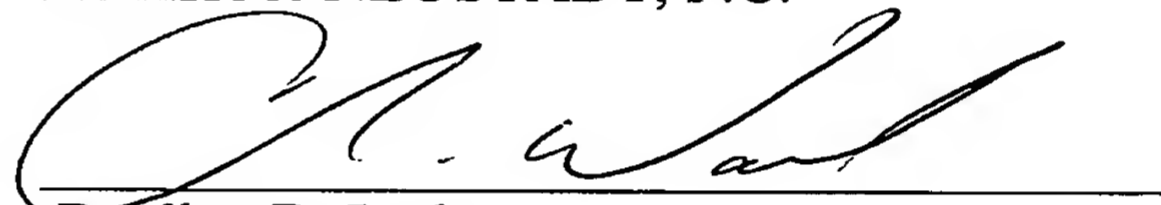
Therefore, it is respectfully submitted that Claims 8, 18, and 19 are not indefinite and it is respectfully requested that the rejection of Claims 8, 18, and 19 under 35 U.S.C. § 112, second paragraph, be withdrawn.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. An Notice of Allowance for Claims 1-5 and 8-20 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicant's undersigned representative at the below listed telephone number.

Respectfully submitted,

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